CLAIMS

1. A reliability buffering method associated with a project planning model having project plan data and having a plurality of activities, wherein each or the plurality of activities has one or more activity time precedence relationships, comprising:

adding activity characteristics data to the project plan data;

generating a reliability buffer duration value corresponding to the project plan data; and

placing a reliability buffer in front of a downstream activity.

2. The reliability buffering method of claim 1, further comprising:

adding activity relationship data to the project plan data.

3. The reliability buffering method of claim 1, further comprising:

altering the one or more activity time precedence relationships.

4. A reliability buffering method associated with a project planning model having project plan data, having a project schedule, and having a plurality of activities, comprising:

selecting a downstream activity from among the plurality of activities;

adding activity relationship data associated with the downstream activity and with at least one upstream activity to the project plan data;

adding activity characteristics data associated with the downstream activity to the project plan data; and

placing a reliability time buffer in a buffer time precedence relationship with the downstream activity to provide a buffered downstream activity.

5. The reliability buffering method of claim 4, wherein adding activity relationship data comprises:

adding a downstream sensitivity value associated with the activity time precedence relationship to the project plan data.

6. The reliability buffering method of claim 4, wherein adding activity characteristics data comprises:

adding an activity reliability value to the project plan data.

7. The reliability buffering method of claim 4, wherein adding activity characteristics data comprises:

adding an activity production rate value to the project plan data.

8. The reliability buffering method of claim 4, wherein the buffer time precedence relationship is finish to start.

9. The reliability buffering method of claim 4, further comprising:

generating a reliability buffer duration value associated with the reliability buffer and corresponding to the project plan data; and

generating an activity time precedence relationship between the buffered downstream activity and the at least one upstream activity, corresponding to the project plan data, to provide an initial reliability buffer project plan.

10. The reliability buffering method of claim 9, wherein the activity time precedence relationship is selected from the group consisting of finish to start, finish to finish, start to start, and start to finish.

11. The reliability buffering method of claim 9, wherein generating the reliability buffer duration value comprises:

selecting one or more upstream activities associated with the downstream activity from among the plurality of activities; and

generating a reliability buffer duration value that reduces a simulated schedule delay to the project schedule that occurs due to simulated schedule delays of respective ones of the one or more upstream activities, and that increases a simulated schedule advance to the project schedule

that occurs due to simulated schedule advances of respective ones of the one or more upstream activities.

12. The reliability buffering method of claim 11, wherein generating the reliability buffer duration value comprises:

selecting a plurality of reliability buffer duration values; and

for each of the plurality of reliability buffer duration values,

generating a simulated project schedule and a simulated project cost;

analyzing the simulated project schedules and the simulated project costs associated with the plurality of reliability buffer duration values; and

selecting the reliability buffer duration value and the associated project schedule corresponding to a smallest simulated project schedule or associated with a smallest simulated project cost.

13. The reliability buffering method of claim 9, wherein generating the activity time precedence relationship comprises:

selecting a time precedence relationship from the group consisting of a finish to start relationship, a finish to finish relationship, a start to finish relationship, and a finish to start relationship;

selecting one or more upstream activities associated with the downstream activity from among the plurality of activities; and

generating a reliability buffer lead or lag value that reduces a simulated schedule delay to the project schedule that occurs due to simulated schedule delays of respective ones of the one or more upstream activities, and that increases a simulated schedule advance to the project schedule that occurs due to simulated schedule advances of respective ones of the one or more upstream activities.

14. The reliability buffering method of claim 9, further comprising:

adding policy data to the project plan data.

15. The reliability buffering method of claim 14, wherein adding policy data comprises:

adding at least one of:

a manpower availability versus time value;

a overtime and flexible headcount control value,

a time buffer,

a thoroughness of quality control value;

a hiring time control value, and

a request for information (RFI) time duration value to the project plan data.

16. The reliability buffering method of claim 9, further comprising:

updating the project plan data to provide an updated reliability buffer project plan.

17. A project management system comprising:

a project data processor to provide project plan data; and

a reliability buffer processor adapted to receive that project plan data and to generate a project plan with reliability buffers.

18. The project management system of claim 17 further including a project plan processor adapted to provide conventional project plan data to the project data processor, and wherein the project data processor is adapted to receive the conventional project plan data and to provide the project plan data..